

## CLAIMS

1. A light emitting device using an LED chip, comprising:
  - a mounting substrate having a recess and having a wiring portion for supplying electric power to the LED chip;
  - the LED chip mounted on a bottom of the recess;
  - a wavelength converting member that is disposed so as to cover the recess and an edge area around the recess and that is excited by light emitted from the LED chip to emit light of a wavelength different from an excitation wavelength; and
  - an emission control member provided at a light output side of the wavelength converting member so as to allow emission of light coming from an area of the wavelength converting member that corresponds to the recess and to prevent emission of light coming from an area of the wavelength converting member that corresponds to the edge area around the recess.
2. The light emitting device according to claim 1,
  - wherein the emission control member is an optical member that is disposed at the light output side of the wavelength converting member and has a light input portion facing the light output side of the wavelength converting member, and the light input portion of the optical member has an end of substantially the same shape as the open end of the recess.
3. The light emitting device according to claim 1,
  - wherein the emission control member is a light blocking frame member disposed on the light output side of the wavelength converting member at a location corresponding to the edge area around the recess, and

the frame member has an opening of substantially the same shape as the opening of the recess.

4. The light emitting device according to claim 3,

wherein the wavelength converting member is made of a material with high elasticity, and an outer edge area of the wavelength converting member is compressed by the frame member pressed against the wavelength converting member.

5. The light emitting device according to claim 1,

wherein the light output side of the wavelength converting member is convex.

6. The light emitting device according to claim 1,

wherein the density of a wavelength converting material in the wavelength converting member increases toward the center of the wavelength converting member.

7. The light emitting device according to claim 1,

wherein the emission control member is a lens disposed over the mounting substrate to have an optical axis coinciding with an optical axis of the LED chip, and

wherein the device further comprises:

a wiring board having a wiring portion that is fixed to the mounting substrate so as to supply electric power to the LED chip; and

a lens holder for positioning and fixing the lens on the wiring board,

wherein a portion of the lens holder that is fixed to the wiring board is located inside as compared with the outer diameter of the lens.

8. The light emitting device according to claim 7, wherein the lens holder is tapered toward the mounting substrate.

9. The light emitting device according to claim 7, wherein the lens is a hybrid lens.

10. The light emitting device according to claim 7, wherein either a top face or a side face of the mounting substrate is fitted to the lens holder.

11. The light emitting device according to claim 7, wherein the lens holder is engaged in either grooves or through holes formed in the wiring board.

12. The light emitting device according to claim 11, wherein the mounting substrate and the lens are positioned and fixed on the wiring board via same fixing means.

13. The light emitting device according to claim 12, further comprising:

a metal foil for soldering that is provided on an under surface of the fixed portion of the lens holder;

a land that has substantially the same shape as the fixed portion of the lens holder and that is formed on the wiring board;

a lead electrode provided on the mounting substrate to be connected to the wiring portion of the wiring board; and

a wiring land that has substantially the same shape as the lead electrode and that is formed on the wiring portion of the wiring board,

wherein the metal foil and the land, and the lead electrode and the wiring land are connected to each other by soldering, respectively.

14. The light emitting device according to claim 12,

wherein a protrusion formed on the under surface of the lens holder is engaged in either the through hole or the groove formed in the wiring board,

wherein a protrusion formed on an under surface of the mounting substrate is engaged in either the through hole or the groove formed in the wiring board.

15. The light emitting device according to claim 1, further comprising:

a light extraction increasing portion provided on a light output side of the LED chip so as to increase efficiency of extraction of light from the LED chip by being combined with the LED chip; and

a sealing resin filling the recess in the mounting substrate where the LED chip is mounted so as to seal the recess,

wherein a top of the light extraction increasing portion is located higher than a top of a wall of the recess.

16. The light emitting device according to claim 15, wherein the mounting substrate has a second recess around the recess so that the resin can flow into the second recess.